

Computer Aided Drafting/Design ITAG: Documentation of Credential and Alignment

Credential Name:	Autodesk Certified Associate in CAD for Mechanical Design Autodesk Certified Professional in Inventor for Mechanical Design Certified SOLIDWORKS Associate in Mechanical Design Certified SOLIDWORKS Professional in Mechanical Design
Credential Type:	X Certification <input type="checkbox"/> License
Issuer of Credential:	Autodesk; SOLIDWORKS
Frequency of Updates:	
Exam(s) Required:	Autodesk Certified Associate in CAD for Mechanical Design certification exam: https://www.autodesk.com/certification/all-certifications/cad-mechanical-design-associate Autodesk Certified Professional in Inventor for Mechanical Design certification exam: https://www.autodesk.com/certification/all-certifications/inventor-mechanical-design-professional Certified SOLIDWORKS Associate in Mechanical Design: https://www.solidworks.com/certifications/mechanical-design-cswa-mechanical-design Certified SOLIDWORKS Professional in Mechanical Design: https://www.solidworks.com/certifications/mechanical-design-cswp-mechanical-design
Additional Requirements:	N/A
Current CTAG/TAG: (if applicable)	CTAG (CTMET005): https://www.ohiohighered.org/sites/default/files/uploads/transfer/CT2/Mechanical%20Engineering%20Technology%20CTAG.pdf TAG (OET012): https://www.ohiohighered.org/sites/ohiohighered.org/files/uploads/transfer/documents/TAG/FINAL%20Learning%20Outcomes%20for%20CAD%20TAG%20Course%209-30-16.pdf
Description of content to be evaluated and aligned:	
How long after attainment can credit be awarded?	3 Years
How can receiving institutions verify credential attainment?	Student must provide proof of certification.

Course Name: Computer Aided Drafting/Design

Credit Hours: 3

Course Description: This course introduces the student to the fundamental concepts used in creating computer-generated drawings using a commercial CAD software. Topics include coordinate systems, construction, text insertion, editing techniques, views, projections, display control inquiry techniques, dimensioning and use of part libraries in the creating of drawings and assemblies. Bill of materials will be generated from multi-sheet assemblies. Students will develop 3D objects using primitive solids and Boolean operations. Learning outcomes are achieved through various in class and laboratory experiences.

Postsecondary Learning Outcomes	Credential Content: Autodesk Certified Associate in CAD for Mechanical Drawing; Autodesk Inventor Certified Professional in Inventor for Mechanical Design	Credential Content: Certified SolidWorks Associate; Certified SolidWorks Professional
1. Demonstrate proficiency of a commercial CAD system based on ASME (ANSI) Y14.5M or equivalent ISO standards.*	Draw and organize objects. Project setup Drawing and Modeling	Sketching and Basic Features
2. Create working drawings using orthographic projections, section views, and auxiliary views.*	Technical detailed drawing creation 3D component modeling 3D assembly modeling and management	Drawings, assemblies, mates
3. Create detail drawings that include dimensions and tolerances.*	Draw and organize objects. Project setup	Drawings, assemblies, mates, reference geometry
4. Create assembly drawings including bill of materials.*	3D assembly modeling and management Assembly modeling	Drawings, assemblies, mates, reference geometry
5. Demonstrate a basic knowledge of 3D modeling.*	3D component modeling 3D assembly modeling and management Advanced part modeling	Sketches, drawings, features, assemblies, and mates